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Army Service Forces
Quartermaster Corps
CLIMATIC RESEARCH LABORATORY
Lawrence, Massachusetts

SECURITY OFFICER

Monthly Report - 1 June 1945

1. The following report was sent to the Office of The Quartermaster General for the approval of General Georges F. Doriot;

Report No. 172 - 10 May 1945

Fuel, Ration Heating, Methenamine
Efficiency and Military Characteristics
Eight Tables

Seven types of methenamine tablets as solid fuel units were evaluated under a variety of environmental conditions. These included: Chemistry Laboratory, 75°F., with no wind and with a 5-6 mph. wind; Cold Room, 0°F., no wind; Rain Court, 45°F., rainfall, 3 inches per hour; Jungle Chamber, 90°F., relative humidity 85 percent; Parker State Forest, 35°F., wet and muddy terrain. Standard evaluation procedures were used for comparative efficiency in regard to heating of C and K rations in the field.

When burned under favorable conditions, the efficiency of methenamine fuel is excellent. Its performance is slightly superior to that of metaldehyde.

A unit weighing 5 grams and shaped in the form of a cylindrical section $7/8$ inch in diameter and $3/8$ inch in height has a caloric efficiency equal to that of any other size of unit available and is acceptable as a military item.

The utility and efficiency of methenamine fuel tablets are seriously affected by their extreme moisture sensitivity.

This defect may be overcome by impregnation of the tablets with refined montan wax.

2. The first two volumes of the reports on the Preble Field Trials have been completed and are being reproduced. Volume I is introductory and includes Administration and Organization, Test Administration, Tactical Administration and Meteorological Observation and Terrain.

Volume II is the first volume of item reports and contains all pertinent information on footgear. The following items are discussed in this Volume: Overshoe, Arctic, Cloth Top; Overshoe, Arctic, Rubber Top; Overshoe, Arctic, M-1945; Dubbing; Dubbing, Shoe Protective; Shoepac, M-1944; Shoepac, Modified, Rubber Top; Shoepac, M-1944, with Modified Yukon Seam; Shoepac, M-1944, All Rubber Construction; Boots, Wader, Knee; Boot, Service, Combat; Boot, Service, Combat, with Neoprene Coating; Boot, Service, Combat, with Neoprene Coating on inseam and toe cap; Boot, Service, Combat, treated with

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ARMY MEDICAL

R E S T R I C T E D

Paraffin-Neatsfoot mixture; Boot, Service, Combat, Full Laced; Socks, Felt, 56 oz; Socks, Water Impermeable; Socks, Wool, Cushion Sole; Socks, Wool, Cushion Sole, All Wool; Socks, Wool, Heavy; Socks, Wool, Ski; Socks, Wool, Ski, with Sewn Toe; Boots, Rubber, Knee; Insoles, Ventilating Type, Fused; Boots, Blucher, High Top; Cover, Impermeable, Foot; Snowshoe, Trail; Snowshoe, Trail, with Standard Binding, Snowshoe, Mountain; Snowshoe, Trail, with Binding, Siwash; Snowshoe, Bearpaw; Creepers, Ice; Creepers, Ice, simplified design; Creepers, Ice, Commercial Type; Overshoes, Rubber, Lightweight.

3. In the Provisional Reports during the month, tests on the following items were discussed:

Trousers, Field, Wool, o.d.
Gloves, Mosquito
Clothing, Protective
Jungle Uniforms
Pad, Sleeping, Inflatable
Drier, Clothes
Socks, Felt, 56 oz.
Shoepacs, Experimental
Bag, Sleeping, Wool
Goggles, Anti-Frost
Bag, Sleeping, Mountain
Flameproof Clothing
Mittens, Cover-All

JOHN H. TALBOTT
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